

POLYETHYLENE

Borstar[®] FB1460

HDPE FOR FILM

DESCRIPTION

Borstar FB1460 is a high molecular weight high density polyethylene film grade, which combines superior physical properties with excellent processability. Due to high density, the material properties are best utilised by processing at HDPE conditions. Film made of **Borstar FB1460** gives a strong and stiff film with high consistency. **Borstar FB1460** contains antioxidant.

APPLICATIONS

Borstar FB1460 is particularly suitable for applications where outstanding and well balanced mechanical properties are required, such as industrial liners and heavy duty bags.

FOOD CONTACT REGULATIONS

Borstar FB1460 fulfils the food contact regulations in most countries. If required, contact your Borouge representative for a certificate.

PHYSICAL PROPERTIES

	Typical Value	Unit	Test Method
Density	946	kg/m ³	ASTM 4883
Melt Flow Rate MFR (190°C/2.16 kg)	< 0.1	g/10 min	ISO 1133
Melt Flow Rate MFR (190°C/5.0 kg)	0.2	g/10 min	ISO 1133
Melt Flow Rate MFR (190°C/21.6 kg)	6	g/10 min	ISO 1133
Melting temperature	131	°C	ISO 3146
Vicat Softening Temperature A (10N)	125	°C	ISO 306
ESCR – 10% Igepal / F50	>5000	Hours	ASTM 1693

PROCESSING GUIDELINES

Borstar FB1550 should be processed in HDPE film extruders in order to obtain optimal performance in extrusion and in mechanical properties.

Recommended extrusion conditions are:

Flat temperature profile with a melt temperature between 210 and 230°C.

Neck height 5 – 8 x die diameter

Blow up ratio 3:1 – 5:1

FILM PROPERTIES		Typical Value*	Unit	Test Method
Tensile strength	MD/TD	75/55	MPa	ISO 1184
Tensile Strain at break	MD/TD	350/550	%	ISO 1184
Tensile modulus (0.05-1.05%)	MD/TD	700/800	MPa	ASTM D 882-A
Tear strength	MD/TD	0.2/1.0	N	ISO 6383
Dart Drop		400	G	ISO 7765-1A
Puncture resistance, force		70	N	ASTM D 4649
Puncture resistance, energy		1.5	J	ASTM D 4649

* The data should not be used for specification work.

** The film properties are strongly dependent on extrusion conditions.

Film properties are measured on a 15 micron film sample produced in a Ø65mm extruder, die 160 x 1.5mm, BUR = 4:1, neck = 8 x die diameter. MD = machine direction, TD = transverse direction.

STORAGE AND HANDLING

The product should be stored in dry conditions at temperatures below 60°C and protected from UV-light. Improper storage can initiate degradation with resulting odour generation and colour changes.

SAFETY

FB1460 is not classified as a dangerous product.

Dust and fines from the product may give a risk for dust explosion. All equipment should be properly grounded. Inhalation of dust may irritate the respiratory system and should be avoided.

During processing of the product small amounts of fumes are generated, which require proper ventilation.

A Safety Datasheet is available on request. Please contact your Borouge representative for more details on various aspects of safety, recovery and disposal of the product.

RECYCLING

The product is suitable for recycling using modern methods of shredding and cleaning but for pipe applications only if approved in the relevant standard or specification. In-house production waste should be kept clean to facilitate direct recycling.

RELATED DOCUMENTS

The following related documents are available on request, and represents various aspects on the usability, safety, recovery and disposal of the product:

Safety data Sheet, SDS
Recovery and disposal of Polyolefins
Information on Emissions from Processing and Fires

Liability statements

- Compliance to Food Contact Regulations
- Heavy Metals